

Research Data Services in European Universities: Current Offerings and Plans for the Future

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A bit about me...



Academic Year 2016-2017

University of Tennessee, Knoxville





DataONE Usability & Assessment Working Group: Assess the needs and motivations of various stakeholders for science data.
(dataone.org)

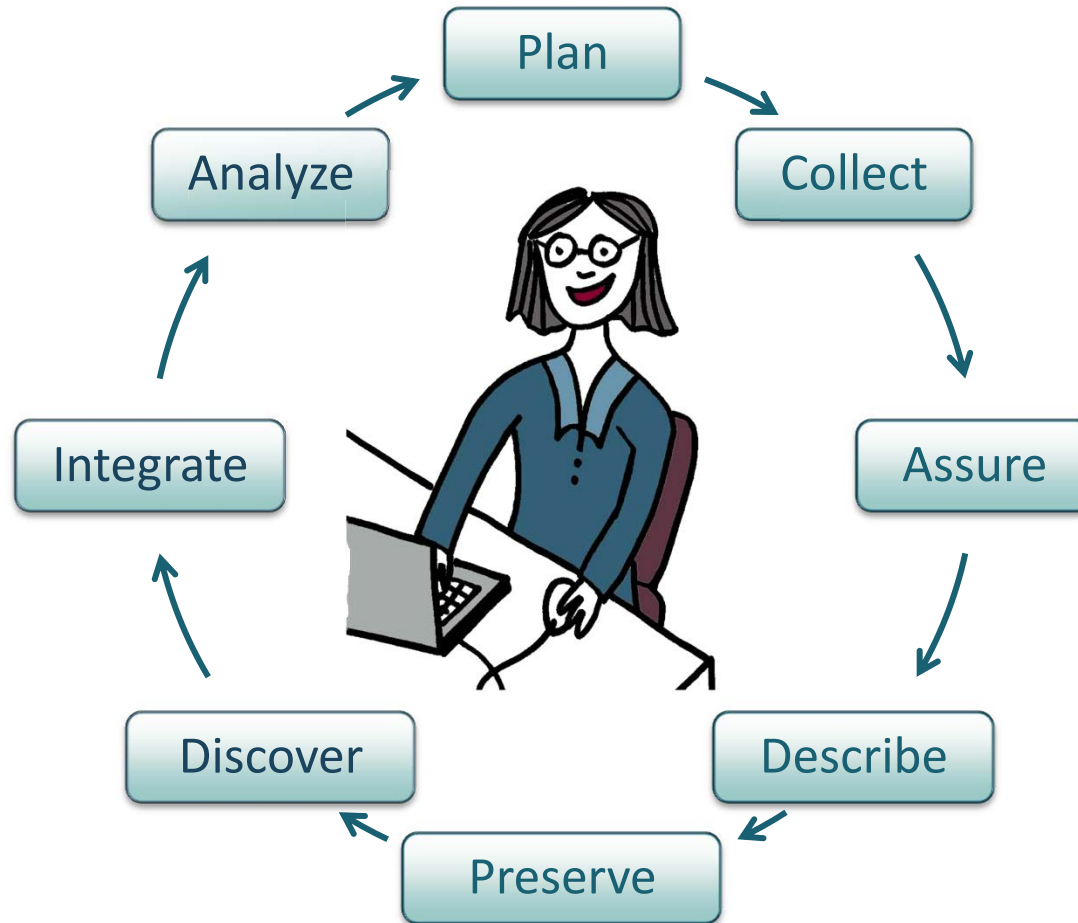


Working Group on Scientific Information Infrastructures: ...collects good practices and lessons learned in the area of research data management in libraries.

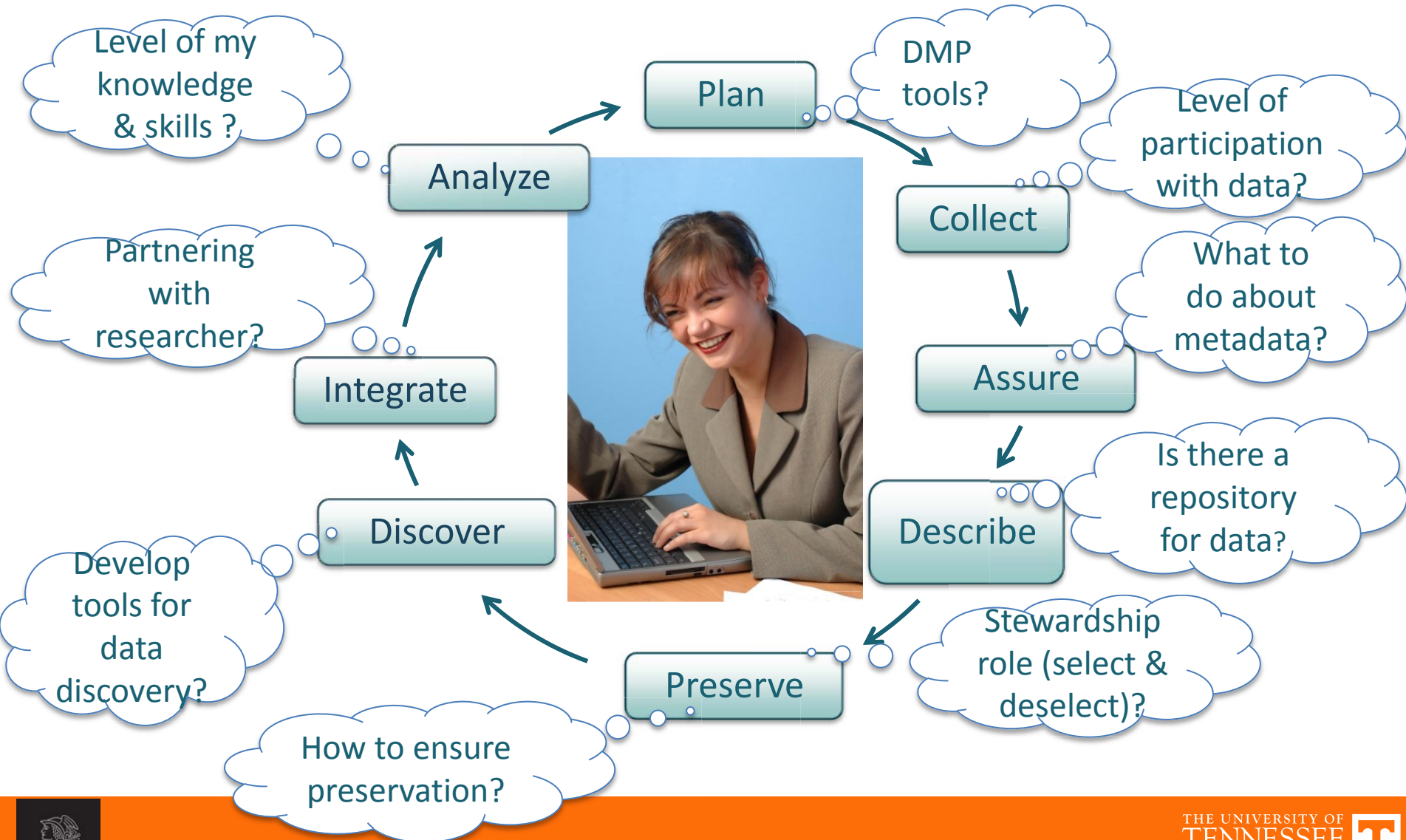
Research Data Services are...

- ...services that address the full data lifecycle, including the data management plan, digital curation (selection, preservation, maintenance, and archiving), and metadata creation and conversion.

DataONE Data Lifecycle



University & Library Challenges



Research Data Services are...

- ...services that address the full data lifecycle, including the data management plan, digital curation (selection, preservation, maintenance, and archiving), and metadata creation and conversion.
- **Services** can be informational or technical

Informational/Advisory RDS

- Collaboration and outreach
- Policy development and planning
- Discussing RDS with others
- Reference for finding and citing data
- Creating web guides and finding aids
- Directly participating on a project
- Consulting on DMPs and metadata
- Training co-workers on data issues

Technical RDS

- Providing tech support for RDS systems/data repositories
- Identifying datasets for deposit in repositories
- Preparing datasets for deposit
- Deselecting datasets for removal from a repository
- Creating or transforming metadata

Assessment of Stakeholders

Public Officials

Data Managers



Publishers



Scientists



Students
& Teachers



Citizen-scientists



Libraries
& Librarians

We are learning about Scientists

1st Scientist Survey (2011)

PLOS ONE
TENTH ANNIVERSARY

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RESEARCH ARTICLE

Data Sharing by Scientists: Practices and Perceptions

Carol Tenopir, Suzie Allard, Kimberly Douglass, Arsev Umur Aydinoglu, Lei Wu, Eleanor Read, Maribeth Manoff, Mike Frame

Published: June 29, 2011 • <http://dx.doi.org/10.1371/journal.pone.0021101>

658 Save	205 Citation
36,313 View	68 Share

Views: 36, 313
Citations: 205
Shares: 68
(published Jun 2011)

2nd Scientist Survey (2015)

PLOS ONE
TENTH ANNIVERSARY

Publish About Browse Search advanced search

OPEN ACCESS PEER-REVIEWED

RESEARCH ARTICLE

Changes in Data Sharing and Data Reuse Practices and Perceptions among Scientists Worldwide

Carol Tenopir, Elizabeth D. Dalton, Suzie Allard, Mike Frame, Ivanka Pjesivac, Ben Birch, Danielle Pollock, Kristina Dorsett

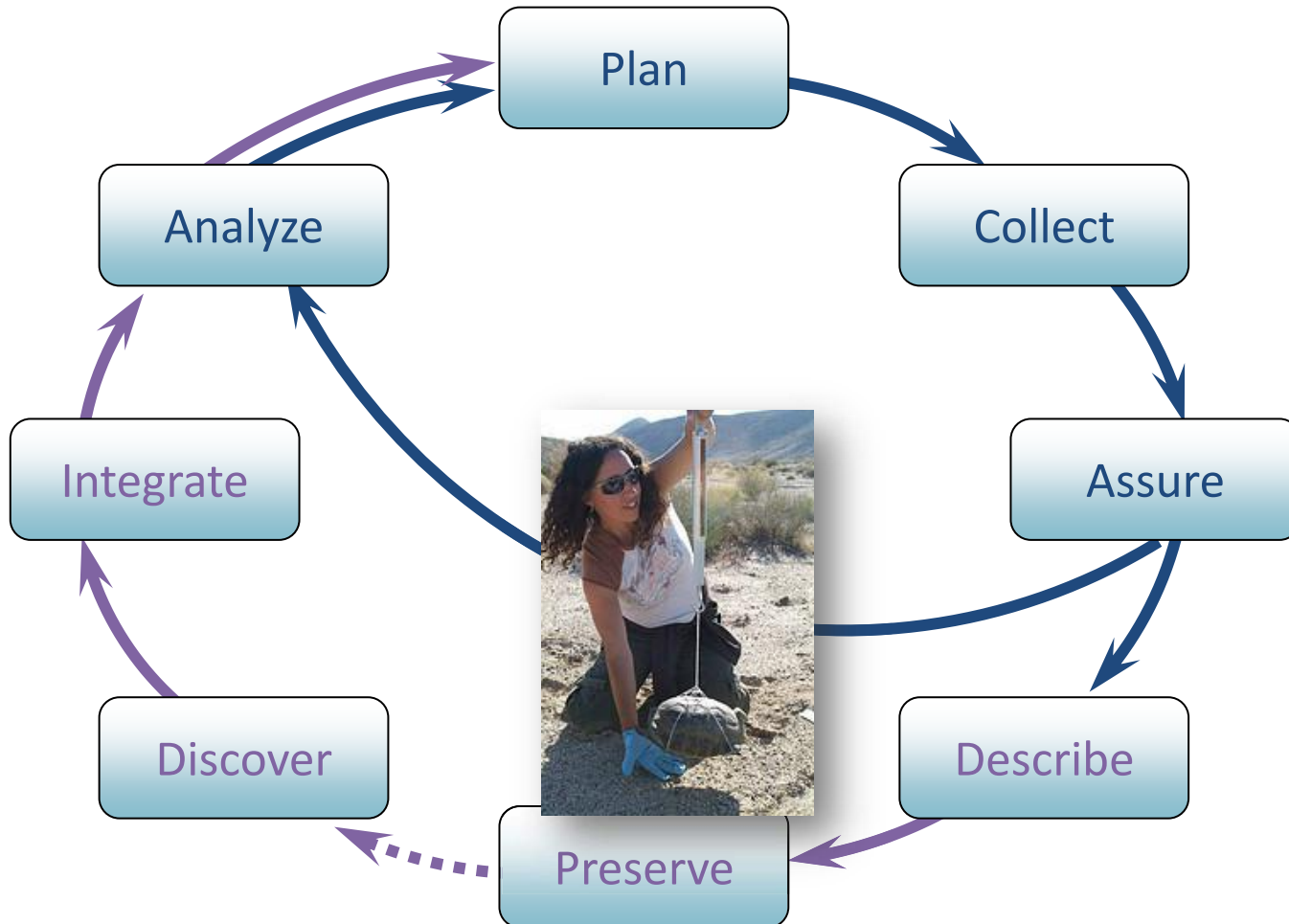
Published: August 26, 2015 • <http://dx.doi.org/10.1371/journal.pone.0134826>

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8,511 View	165 Share

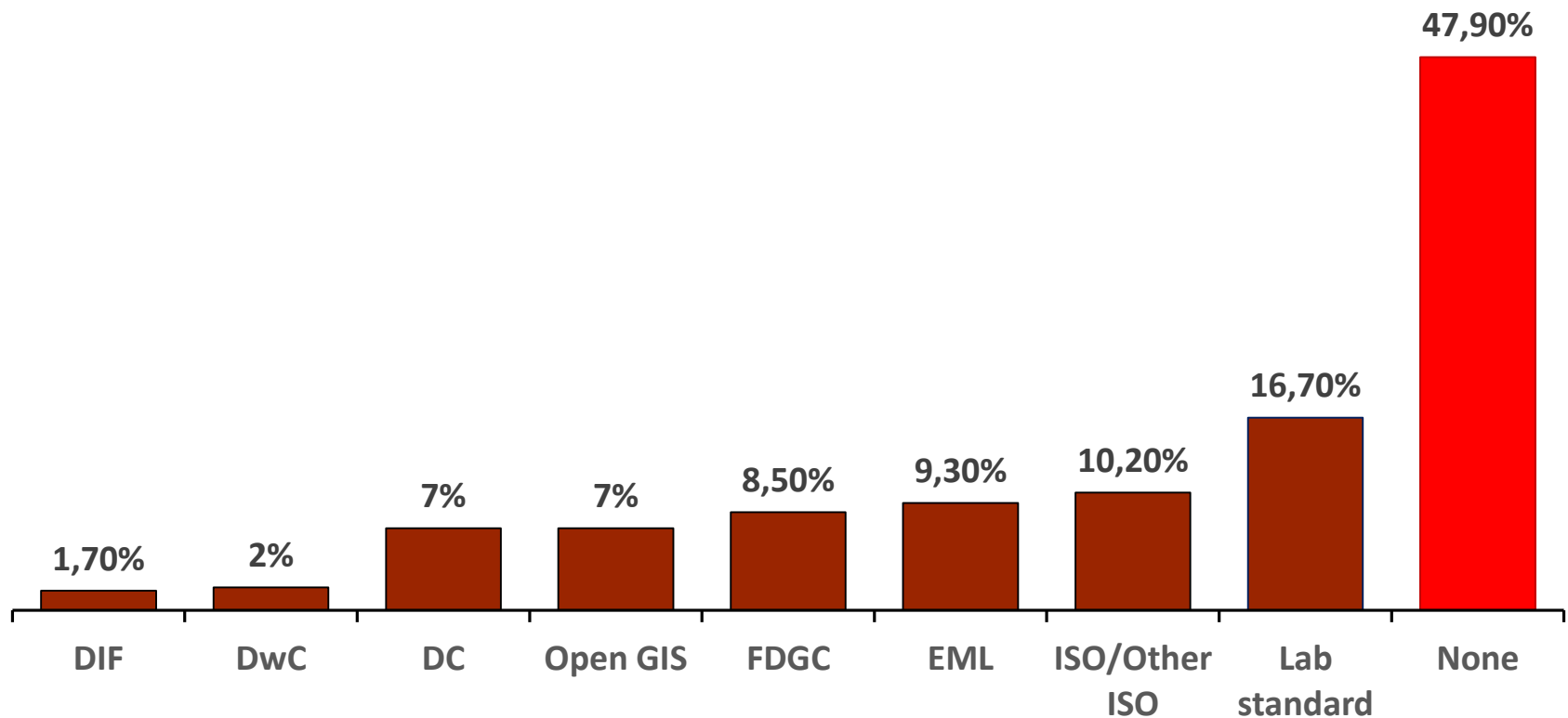
Views: 8,511
Citations: 8
Shares: 165
(published Aug 2015)

Results of DataONE *scientists* surveys show opportunities for universities and libraries...

Researchers might...

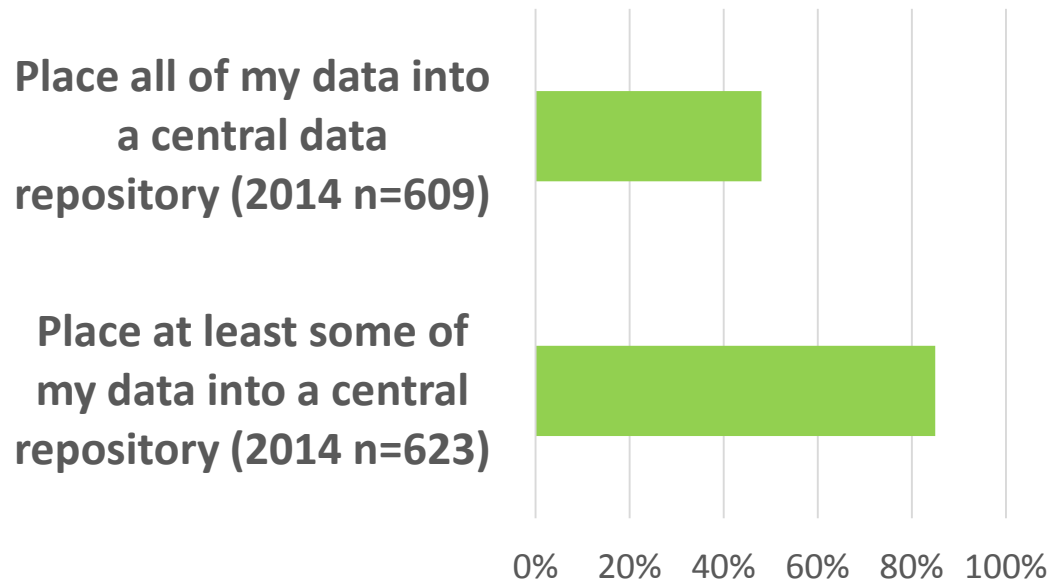


What metadata do you currently use to describe your data? (2014-2015)



Most are willing to share at least some data...

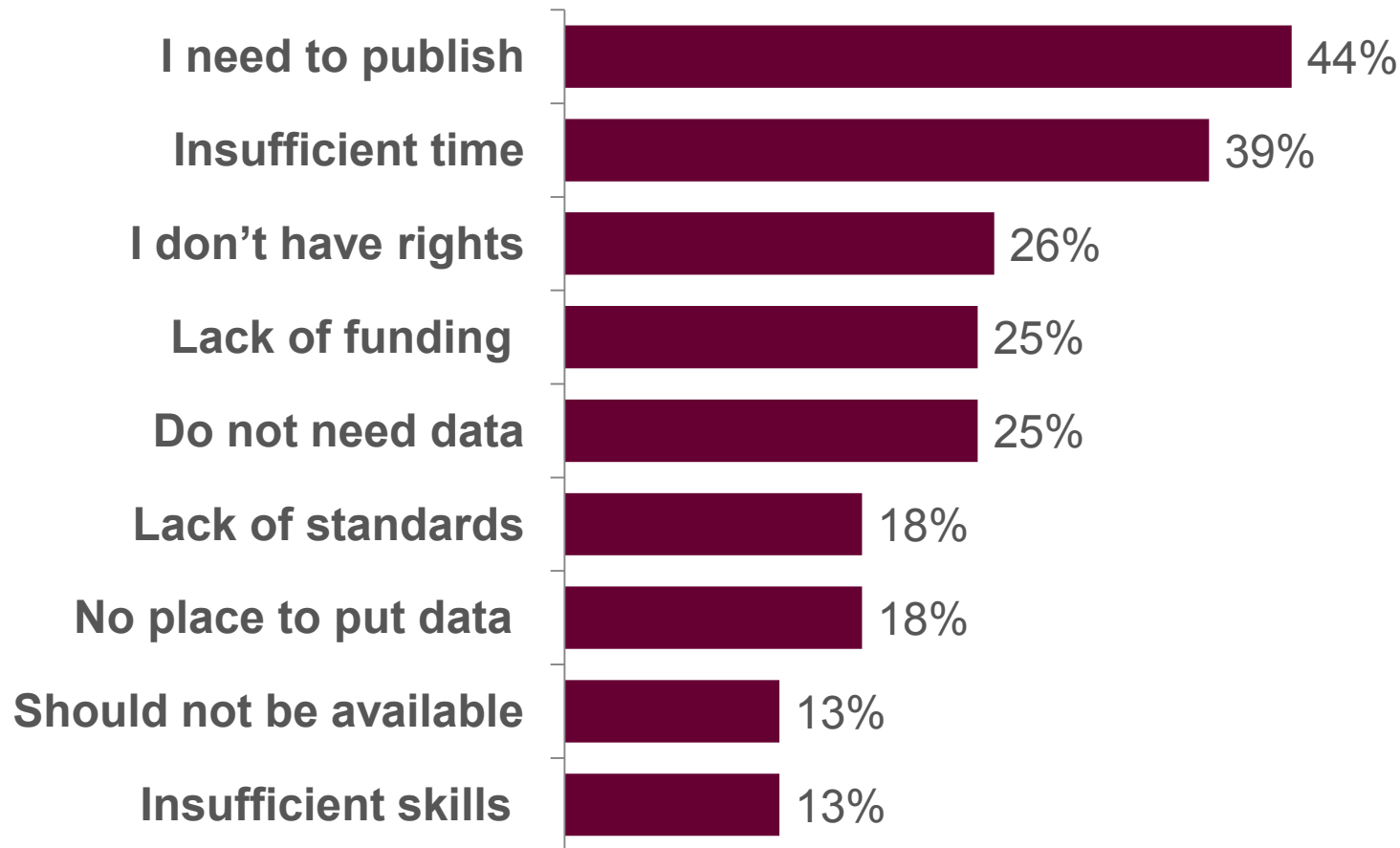
I am willing to:



Gap between willingness to share and accessibility

- Although 80% of scientists agree “I share my data”
- Only 46% agree “Others can access my data easily”

Barriers for scientists



Barriers also include perceptions that data may be ...

... misinterpreted due to the complexity of the data.

82% agree or strongly agree.

... misinterpreted due to the poor quality of the data.

81% agree or strongly agree.

... used in other ways than intended.

81% agree or strongly agree.

However, lack of access to data ...

... is a major impediment to progress in science

75% agree or strongly agree.

... has restricted my ability to answer scientific questions

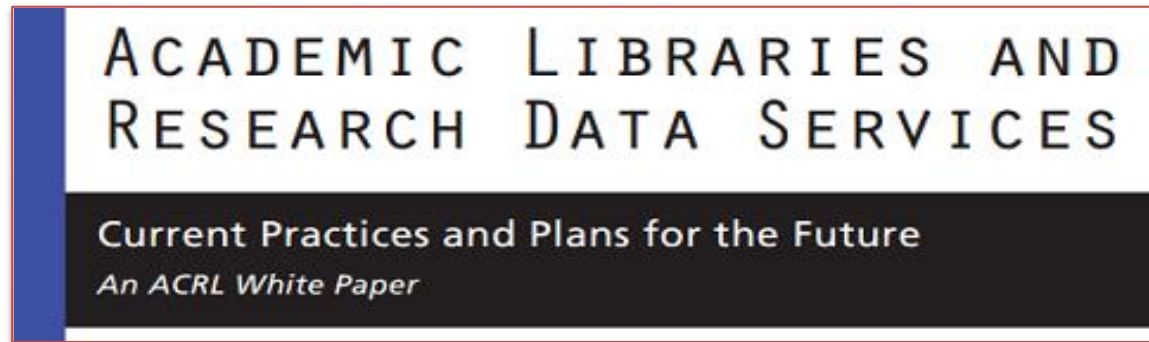
53% agree or strongly agree.

Libraries...

- Facilitate interdisciplinary work and data knowledge through collections and services
- Understand metadata
- Know how to find information about data
- In partnership with other administrative units can take a leadership role in a variety of **research data services**

European Survey Builds on Previous DataONE Library Surveys

1st Library (2012)



Citations: 82
(published June 2012)

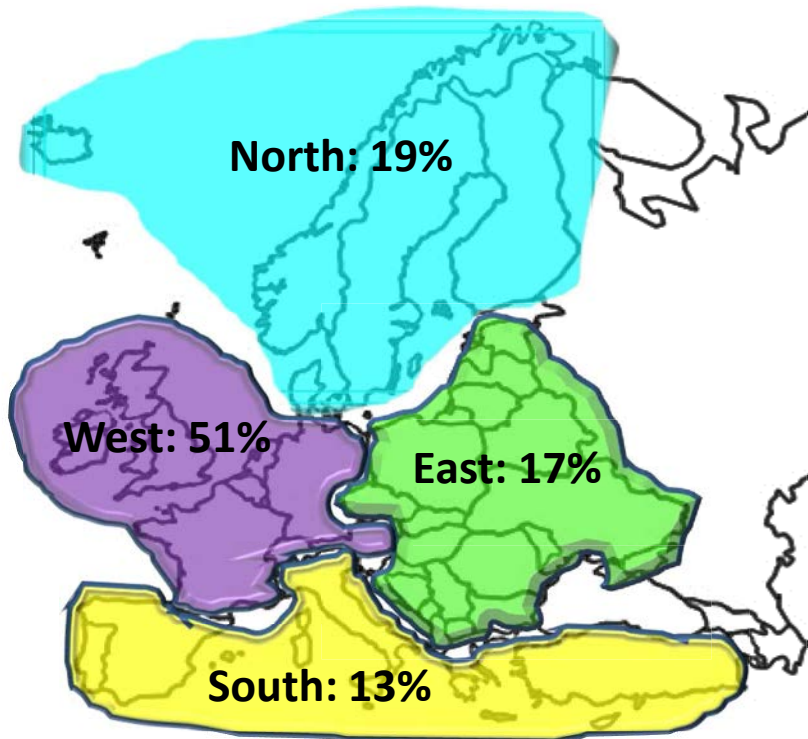
2nd Library (2015)



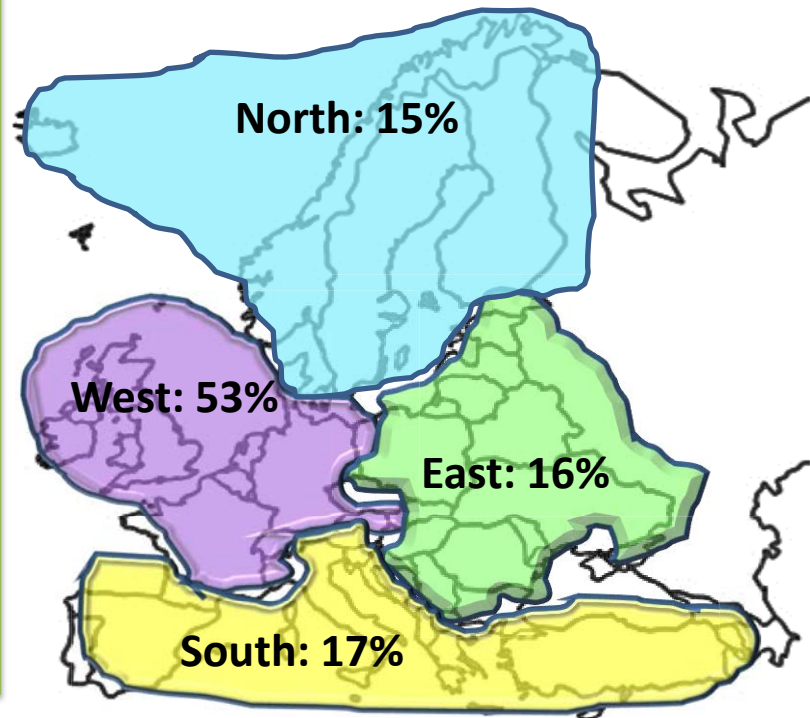
Citations: 11
1,518 downloads
(published Dec 2015)

LIBER Survey of European Academic Research Libraries: 2016-2017

Survey Respondents



LIBER Academic Library Membership

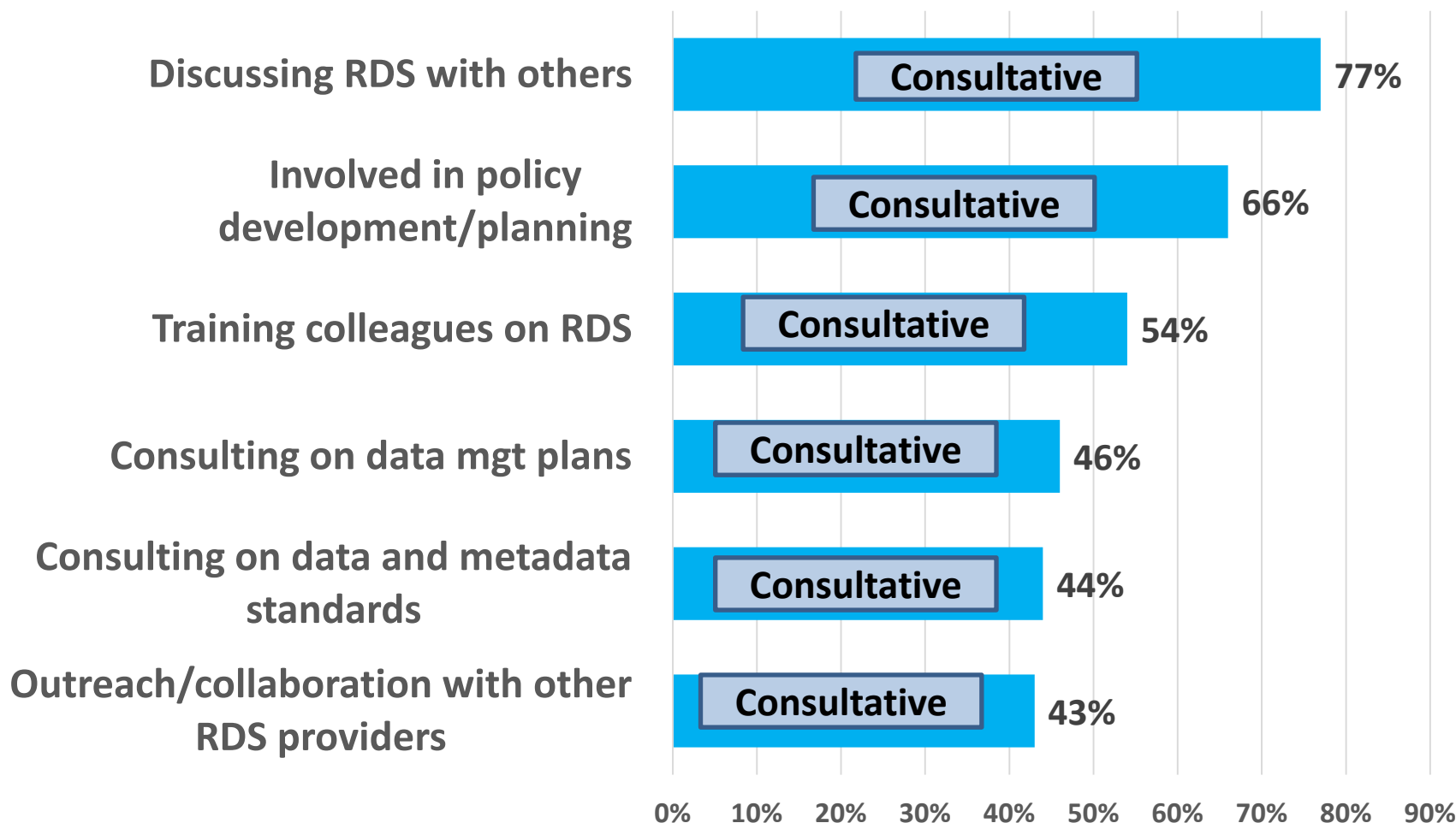


Key Findings

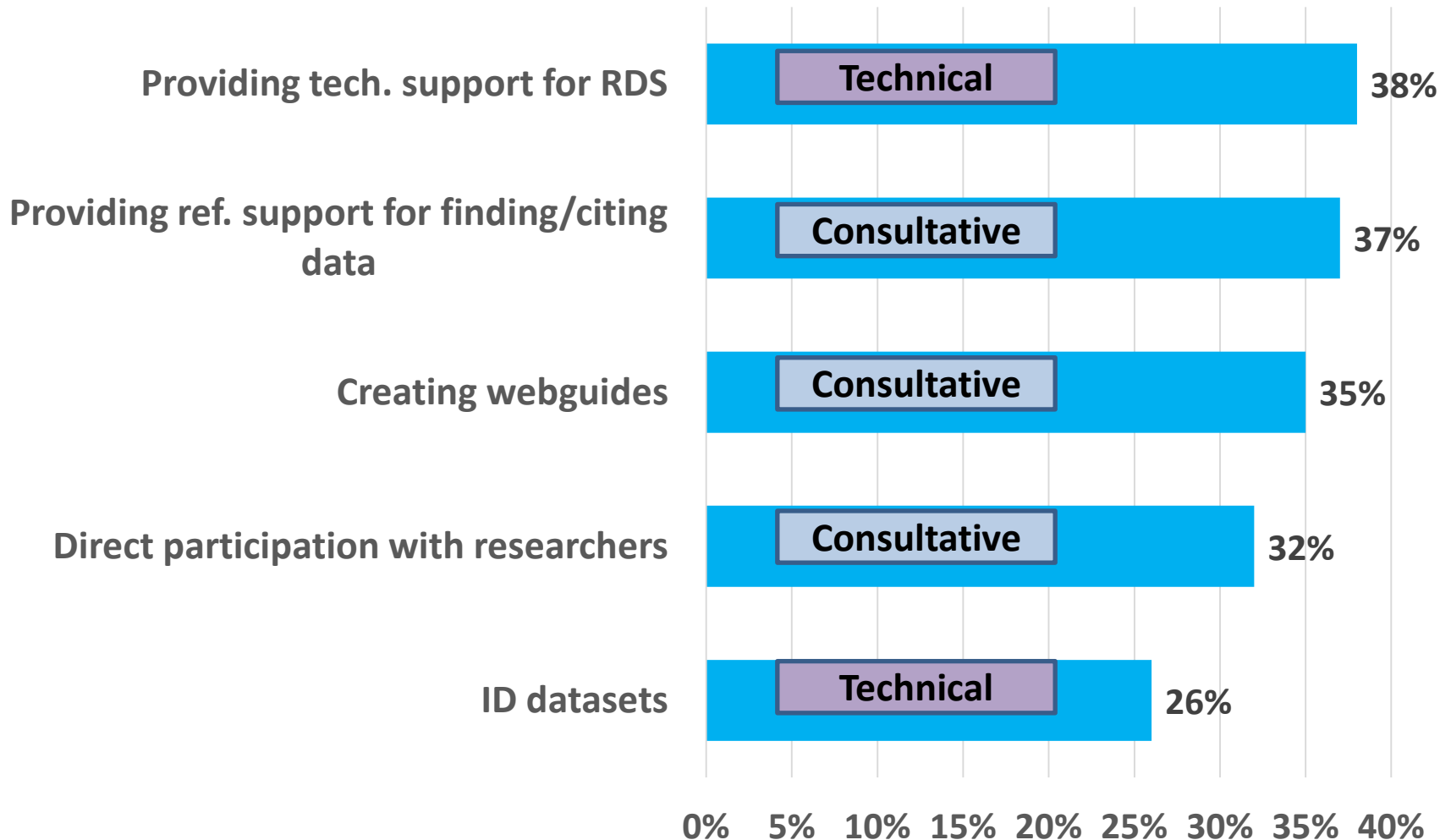
1. LIBER academic libraries offer and are planning a range of Research Data Services, but...
 - ...Consultative RDS are most common
 - ...Fewer libraries offer technical RDS
2. There are some regional differences
3. Libraries use a variety of strategies for developing staff skills

1) LIBER academic libraries offer and are planning a range of Research Data Services

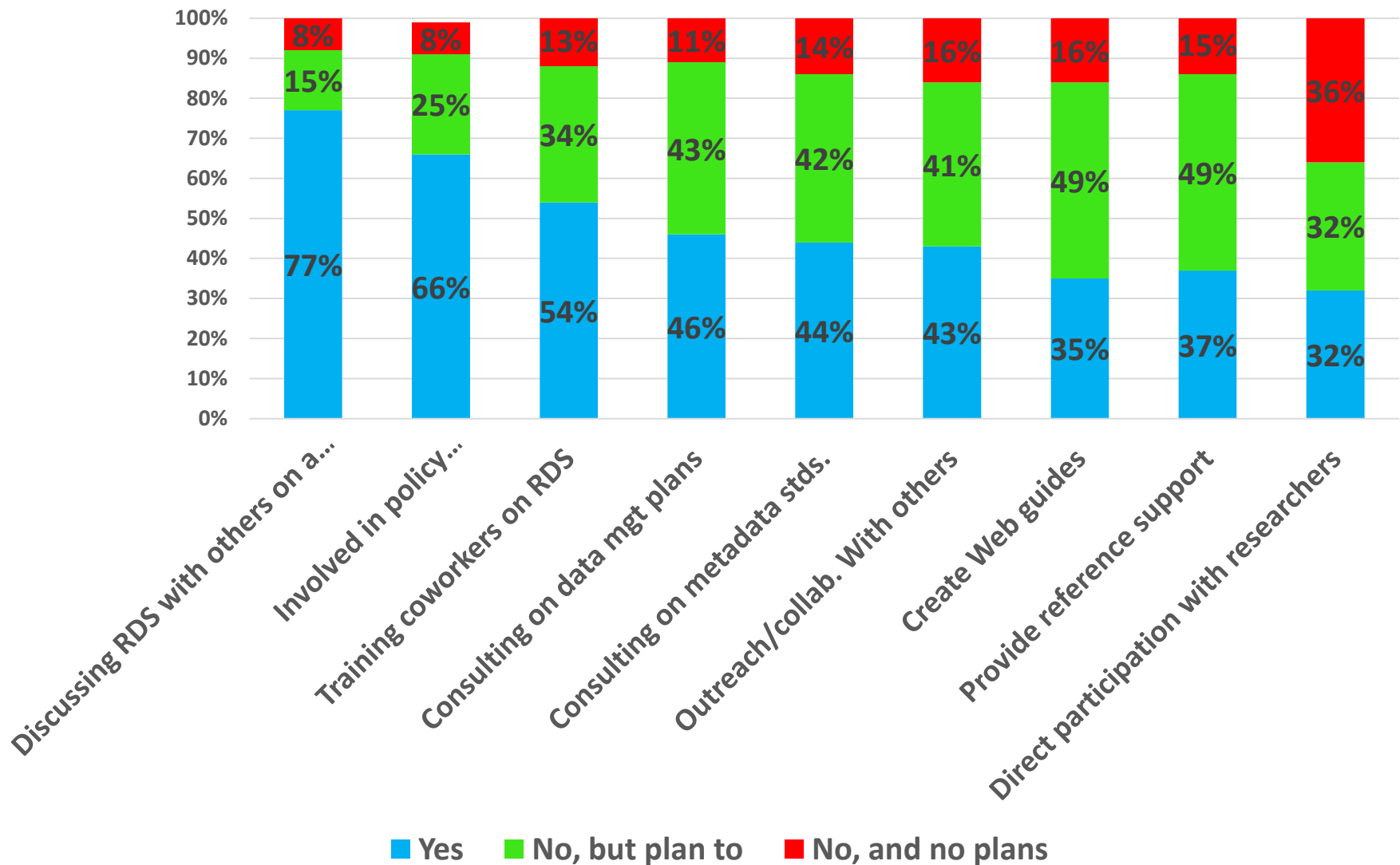
RDS offered by most libraries currently



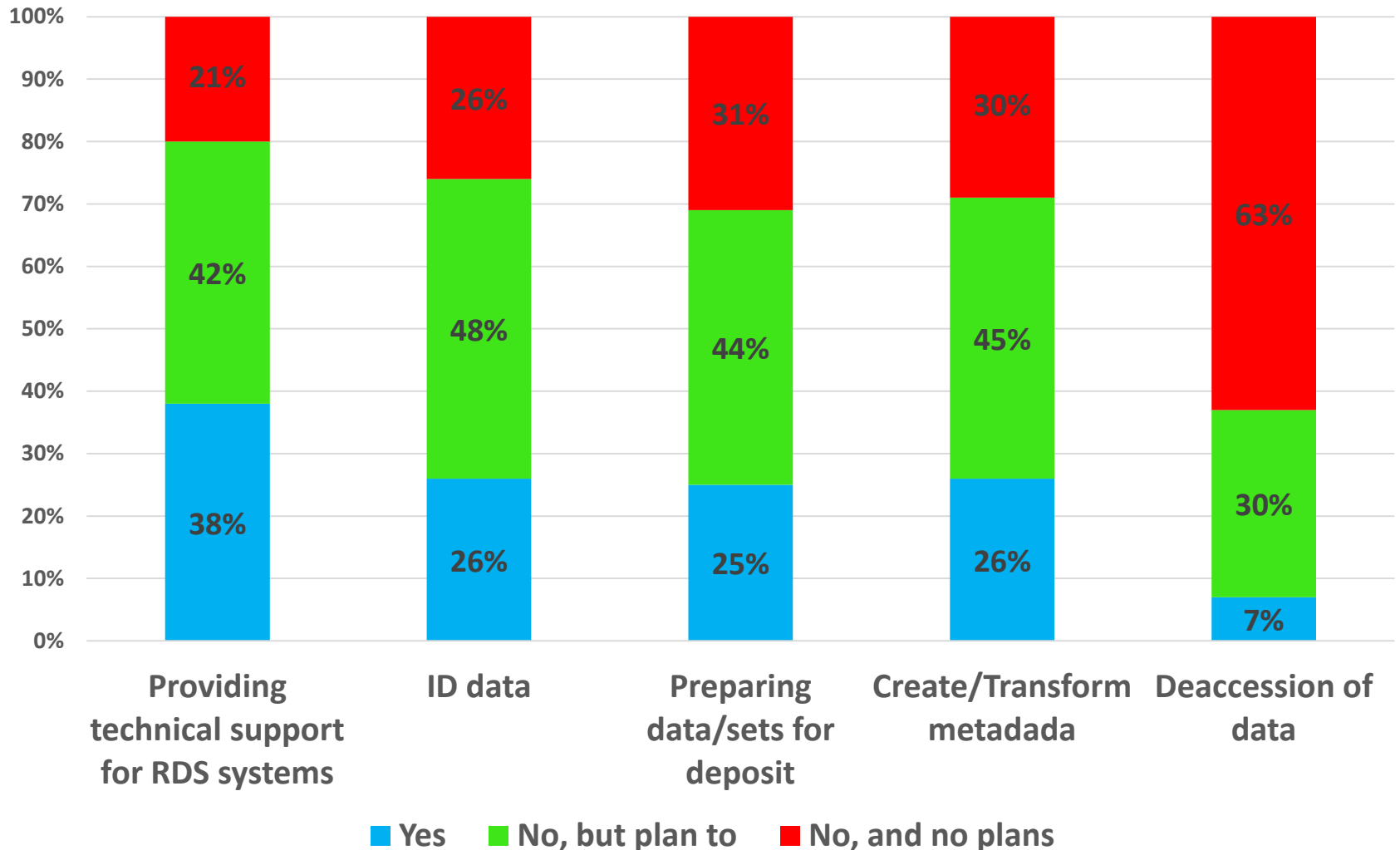
RDS offered continued



Currently offered and future plans for consultative-type services



Currently offered and future plans for technical-type services



2) There are some regional differences

Libraries in **North** and **West** are more likely to be:

- Currently training colleagues on RDS
- Discussing RDS with others
- Collaborating with other RDS providers
- Active in policy development and strategic planning for RDS

Libraries in **South** and **West** are more likely to be:

- Active in consulting with academic staff or students about data management plans and metadata standards
- Identifying datasets for deposit
- Creating or transforming datasets and metadata

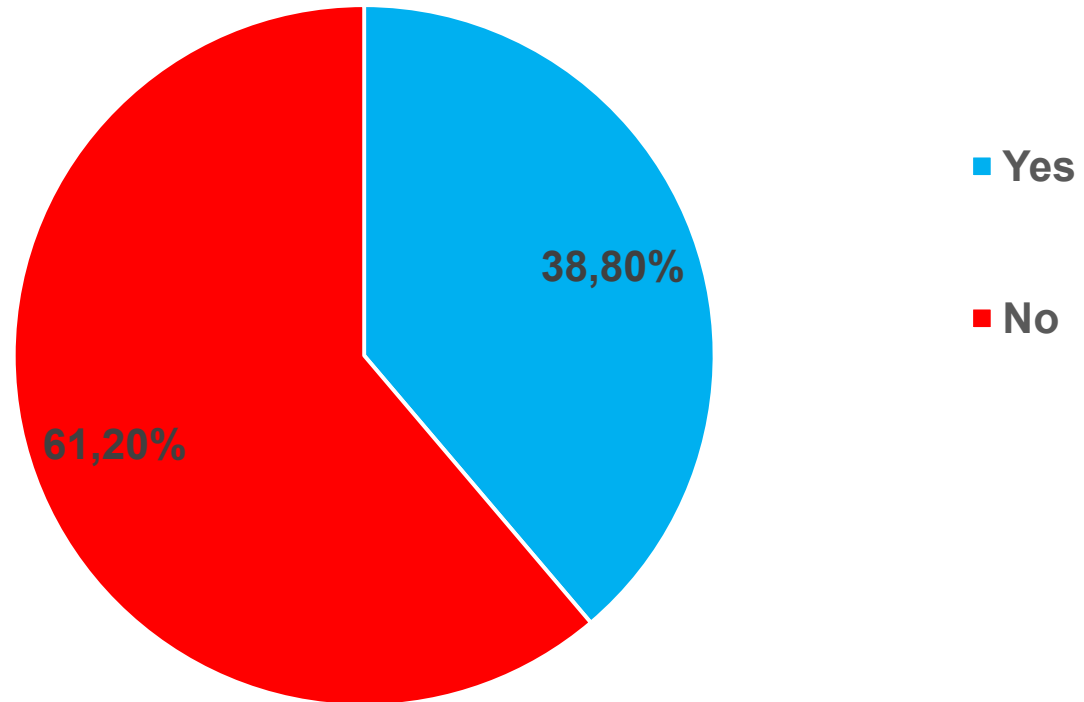
We also know...

- There is great variation
- Some universities and some countries within a region are ahead in RDS

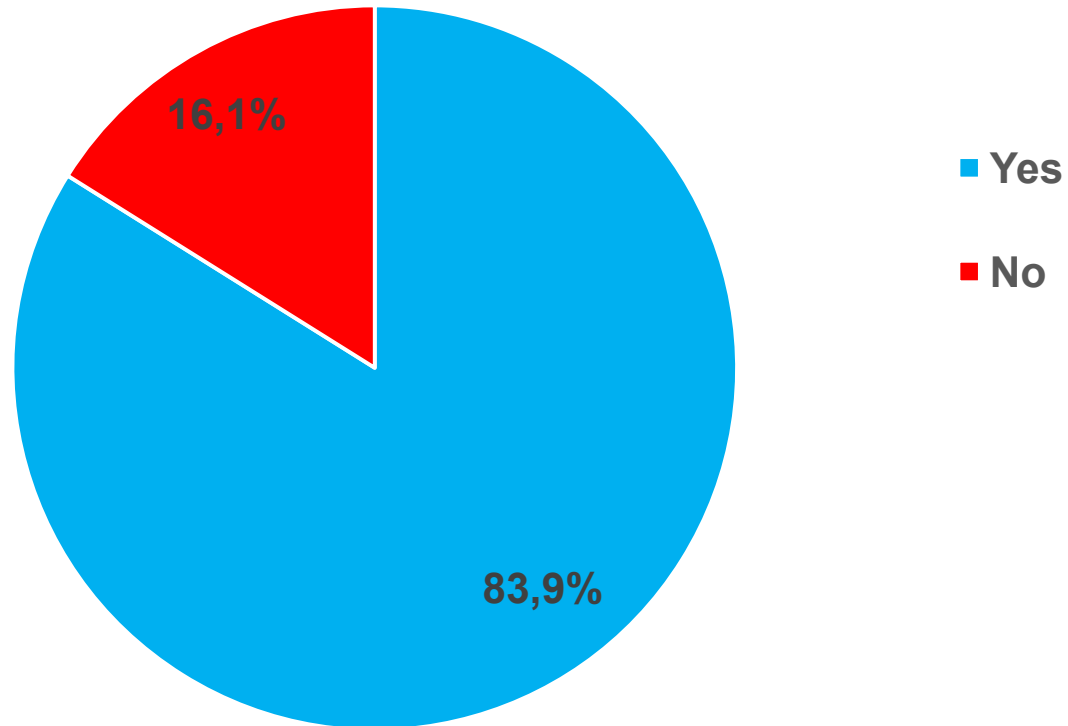


3) Libraries have a variety of strategies for developing staff skills

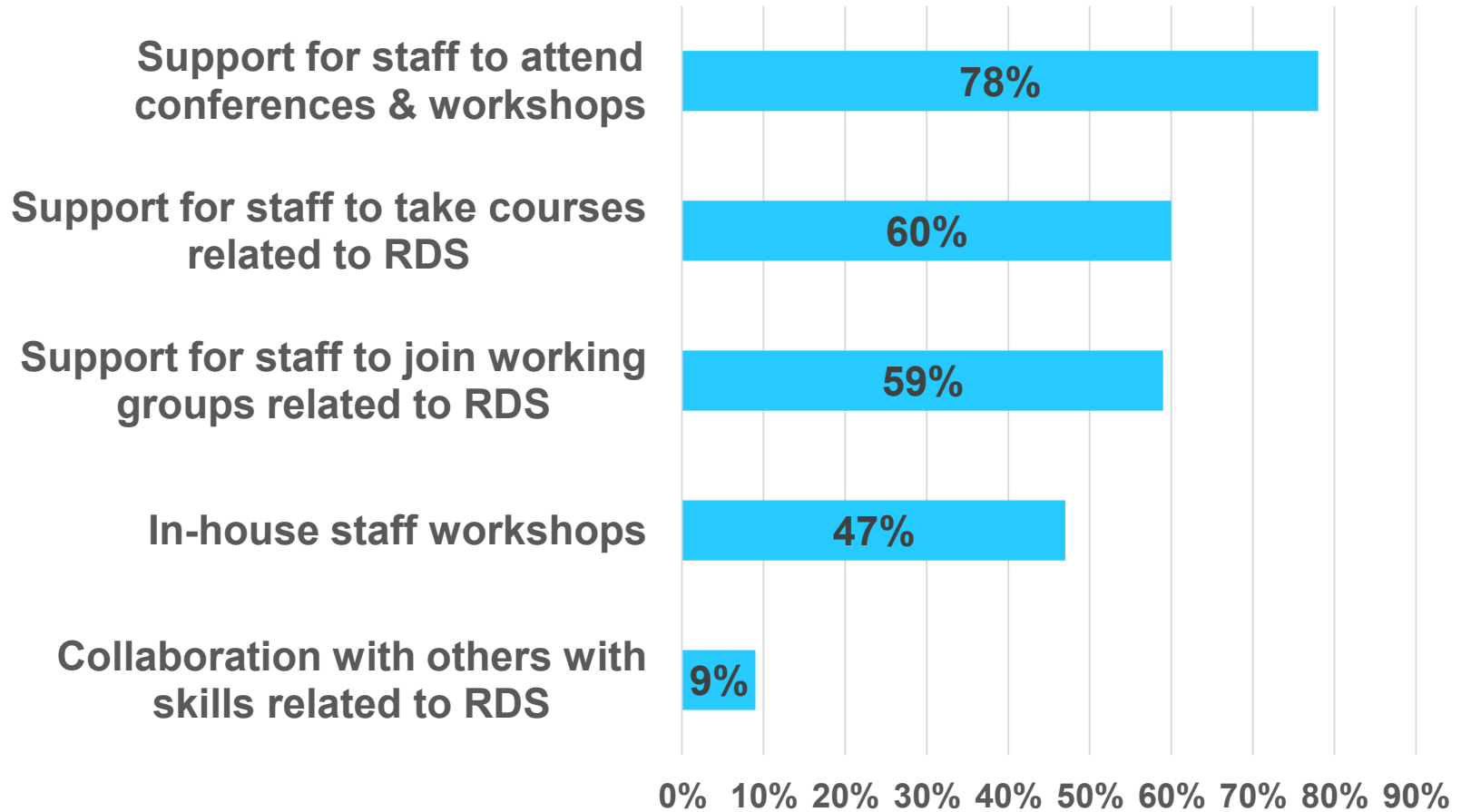
Have you hired staff for RDS in the last 12 months?



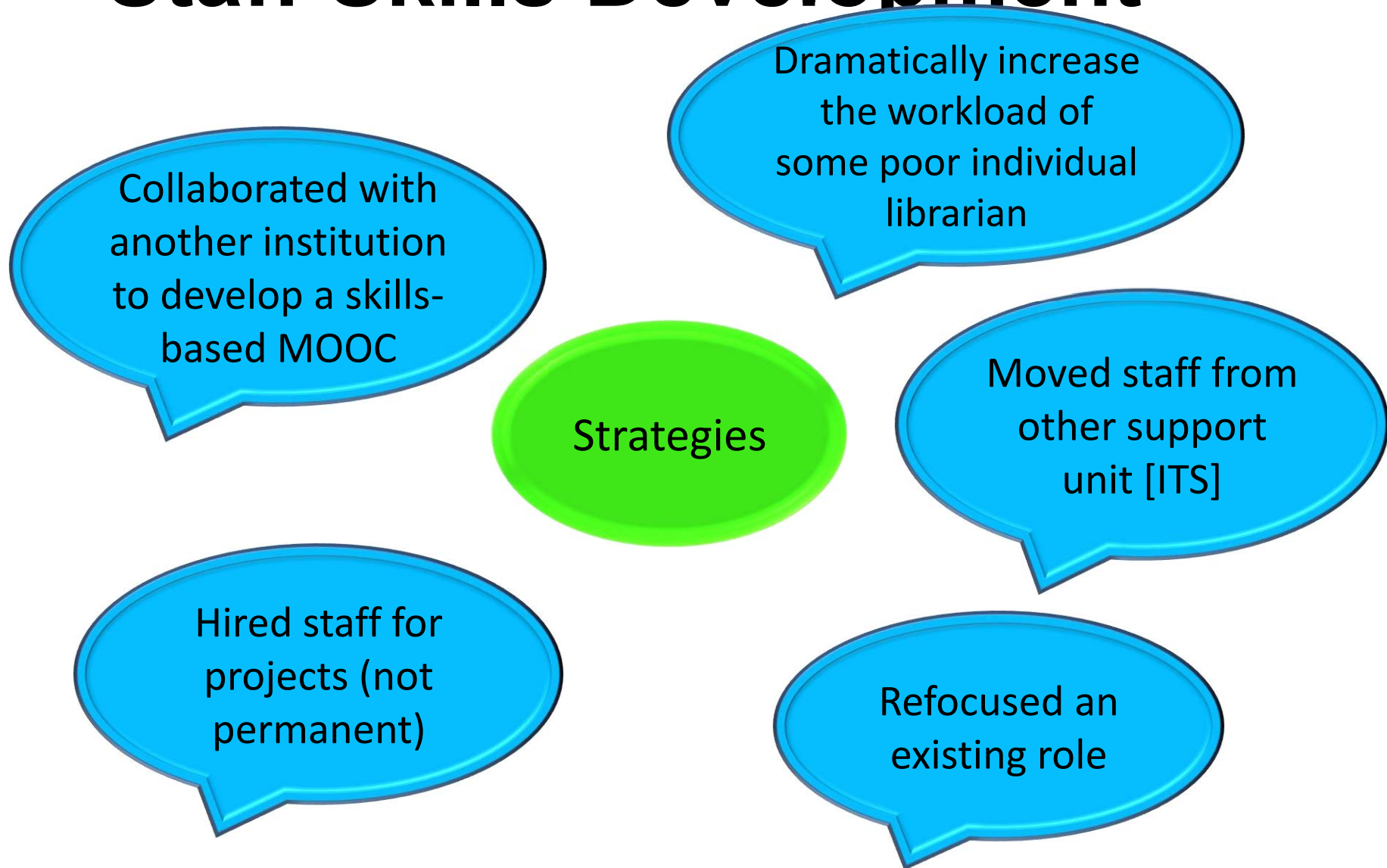
Has your library provided opportunities for library staff to develop skills related to RDS?



Which of the following opportunities has your library provided for library staff to develop skills related to RDS?



Staff Skills Development



Assistance with training



<http://datalib.edina.ac.uk/mantra/>

EDINA



Ligue des Bibliothèques Européennes de Recherche
Association of European Research Libraries

*LIBER is Europe's largest network of research libraries,
with over 400 members.*

**Working Group on Scientific Information
Infrastructures**

Tools for RDS Education and Assistance

<https://www.dataone.org/education-modules>



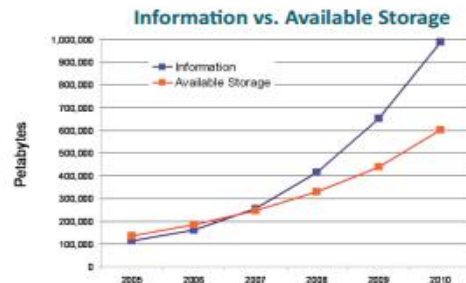
Lesson 1: Data Management

View all Education Modules at <https://www.dataone.org/education-modules>

The world of data around us

The data deluge has created a surge of information that needs to be well-managed, discoverable, and accessible.

The amount of available storage is not keeping pace with the amount of data being produced.



Gantz, The Expanding Digital Universe

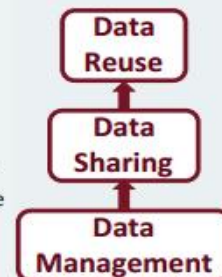
Causes of data loss

- Natural disasters
- Facilities infrastructure failures
- Storage failure
- Server hardware or software failure
- Application software failure
- Human errors
- Malicious attack
- Format obsolescence
- Loss of competencies
- Loss of funding
- Loss of insitutional commitment

Why manage data: the researcher perspective

- Keep yourself organized \Rightarrow find your own files!
- Track your processes for reproducibility
- Better version control of data
- More efficient data quality control
- More backups to avoid data loss
- Format your data for reuse by yourself & others
- Document your data for understability and reuse
- Prepare it to share it & gain credibility and recognition for your scientific efforts

Data management facilitates sharing and reuse.



Data Reuse Example

Researchers reused and aggregated data from several different sources to determine migration routes for specific bird species.



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The Case for Data Management

DataONE Education Modules

1. Why Data Management
2. Data Sharing
3. Data Management Planning
4. Data Entry and Manipulation
5. Data Quality Control and Assurance
6. Protecting Your Data
7. Metadata
8. How to Write Quality Metadata
9. Data Citation
10. Analysis and Workflows
11. Legal and Policy Issues

Thanks to the LIBER Study Team!

Research Data Services in European Academic Research Libraries. <https://www.liberquarterly.eu/articles/10.18352/lq.10180/>

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